PEO Soldier

Armaments for Full Spectrum Warfare

Activated 7 June 2002
www.peosoldier.army.mil

Colonel (P) Jamey Moran
Program Executive Officer

Agenda

- **Introduction**
- Land Warrior/Air Warrior
- Sensors and Lasers
- Clothing and Individual Equipment
- Weapons

One Team
Fielding Soldier Products

167 Programs

24 Programs

1 Program

3 Programs

6 Programs

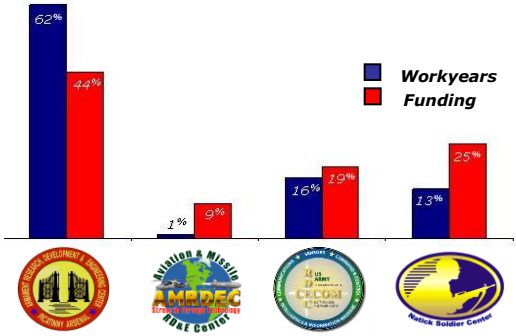
4 Programs

10 Programs

11 Programs

ATEC Operational and Developmental Testing

TRADOC



ARDEC **AMRDEC** **CERDEC** **NSC**

AMC

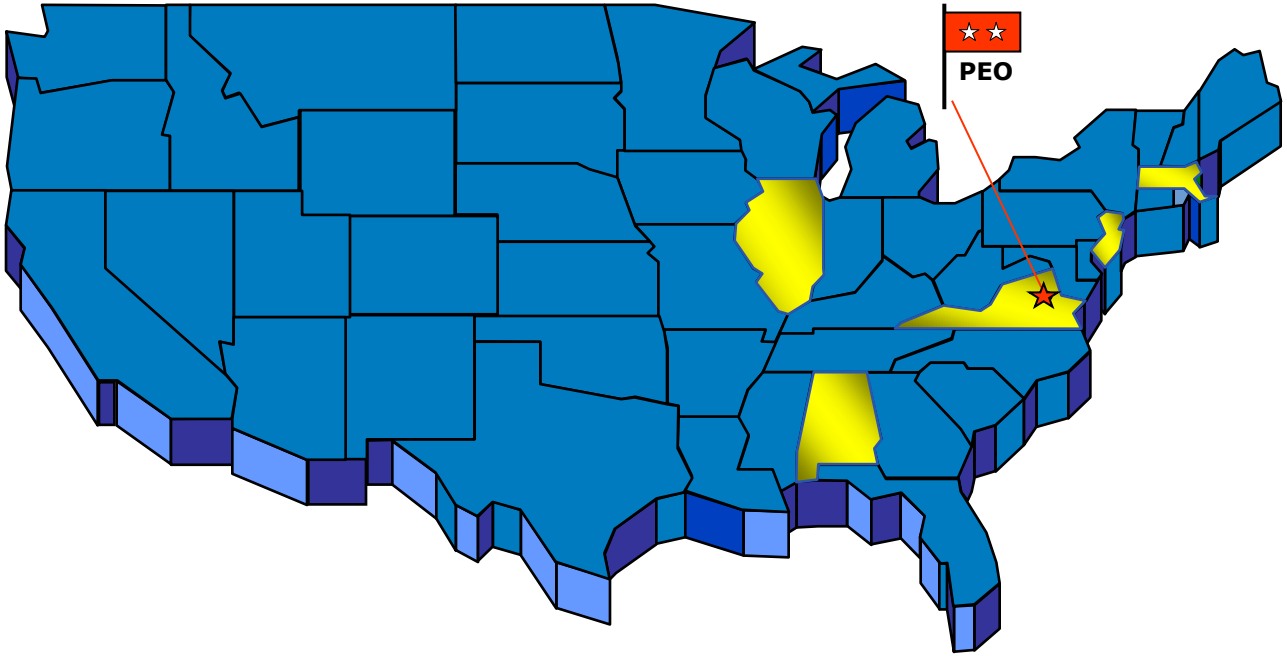
Needs & Requirements

Science & Technology

1 Program 13 Programs 25 Programs 1 Program

Gateway To The Soldier

Program Executive Office Soldier Locations



Fort Belvoir, VA	Picatinny Arsenal, NJ	Redstone Arsenal, AL	Matrix Personnel
PEO Soldier	PM Soldier Weapons	PM Air Warrior	Fort Belvoir, VA
PM Soldier Warrior	PM Individual Weapons		Fort Monmouth, NJ
PM Soldier Equipment	PM Crew Served Weapons		Natick, MA
PM Land Warrior			Picatinny Arsenal, NJ
PM Sensors & Lasers			Rock Island, Il
PM Clothing & Ind Equip			
PM Future Warrior (planned)			

What Did We Learn?
1995 - Present

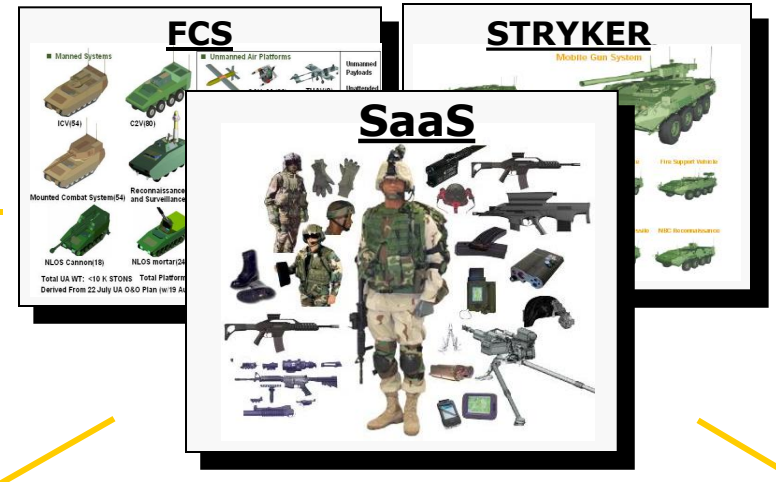
"America's Most Deployed Weapon System"

SaaS
Soldier-as-a-System

Weapons & Ammo

Warrior Integration
- Land Warrior
- Air Warrior
- Mounted Warrior

Communications



Organizational Clothing & Individual Equipment (OCIE)

Sensors & Lasers

Situational Understanding
Situational Awareness
Command & Control

Equipping ALL Soldiers on the Battlefield

Fielding an Objective Force Soldier

- *Land Warrior*
- *Air Warrior*
- *Mounted Warrior*

Soldier Integration +

XM8

XM320

XM29

XM307

XM312

XM107

... etc

Soldier Weapons & Ammo +

CDA

Radios

CDA-T

Aviation (EDM)

... etc

C2/ SA/SU +

TWS

Laser Ranger

MFL

Laser Designator Illuminator

ENVG

... etc

Soldier Sensors & Lasers +

Micro UAV

FCS Squad Mule

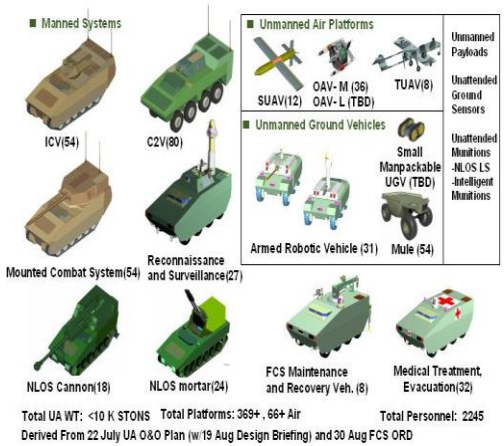
... etc

Soldier ASIOE

Fielding Objective Force Soldier requires alignment *and* funding of *multiple* programs

Managing Systems

These challenges determine our efficiency

	FCS	STRYKER	Soldier as a System
			
# Requirements	**1**	**1**	**346**
# Funding Lines	**1**	**1**	**41**
# TRADOC Entry Point	**1**	**1**	**12**

Soldier Family of Systems
TREAT IT THE SAME

Agenda

- Organization
- **Land Warrior/Air Warrior**
- Sensors and Lasers
- Clothing and Individual Equipment
- Weapons

Product Manager Air Warrior

The Soldier

Integrate Equipment and Aircrew

Helmet Mounted Displays

HGU-56/P Helmet

Maxillofacial Shield

Laser Eye Protection

Communications Earplug

Electronic Data Manager

Microclimate Cooling Subsystem

Survival Equipment Subsystem

Air Warrior

The Aircraft

Integrate Aircrew, Systems and Aircraft

CH–47 Chinook

OH–58D Kiowa Warrior

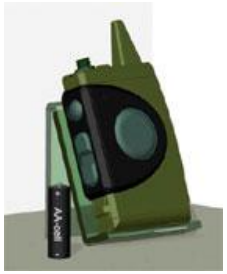
AH–64 Apache

UH–60 Blackhawk

RAH–66 Comanche

Microclimate Cooling

Cockpit Air Bag System



Aircraft Wireless Intercom

Helicopter Oxygen System

Land Warrior

GPS

Water Hydration System

Helmet Mounted Display

Daylight Video Sight

M4 Modular Weapon System

User Input Device (Hand Grip)

Communications Subsystem

Computer Subsystem

NOMEX Gloves

Interceptor Body Armor

MOLLE

Knee & Elbow Pads

Intercom Radio

Commander's Digital Assistant

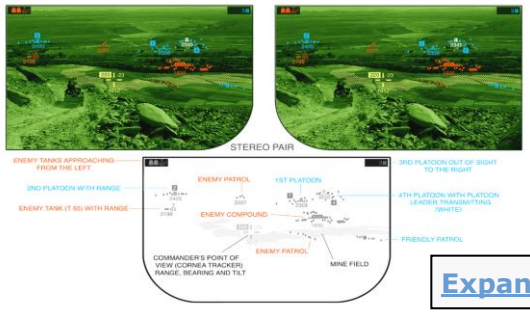
2 Programs

Land Warrior Advanced Capability

Sensory Enhancement

Systems Engineering, Analysis & Assessment

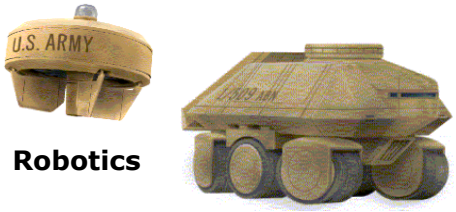
Protect (Integrated Suit & Helmet)



Expand

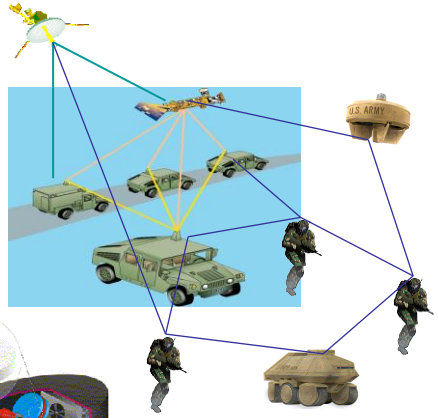
Collaborative Networked Situational Understanding

Strike
(Exploit FCS Netted Fires)

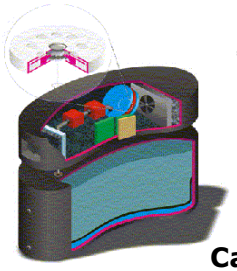


Robotics

Human Performance & Embedded Training



Power Sources



Capstone Training & Demo

Push Envelope – Discover Possibilities

Agenda

- Organization
- Land Warrior/Air Warrior
- **Sensors and Lasers**
- Clothing and Individual Equipment
- Weapons

Product Manager Sensors and Lasers

Multi-function Laser System

AN/PEQ-2A Aiming Light/Illuminator

VIPER

AN/PAQ-4C Aiming Light

Lightweight Laser Designator/Rangefinder (LLDR)

Aviator's Night Vision Imaging System (ANVIS)

Aviator's Night Vision Imaging System/Heads-up Display (ANVIS/HUD)

Lightweight Video Recon System

Night Vision Devices AN/PVS-7D and AN/PVS-14

Family of Thermal Weapon Sight (TWS)

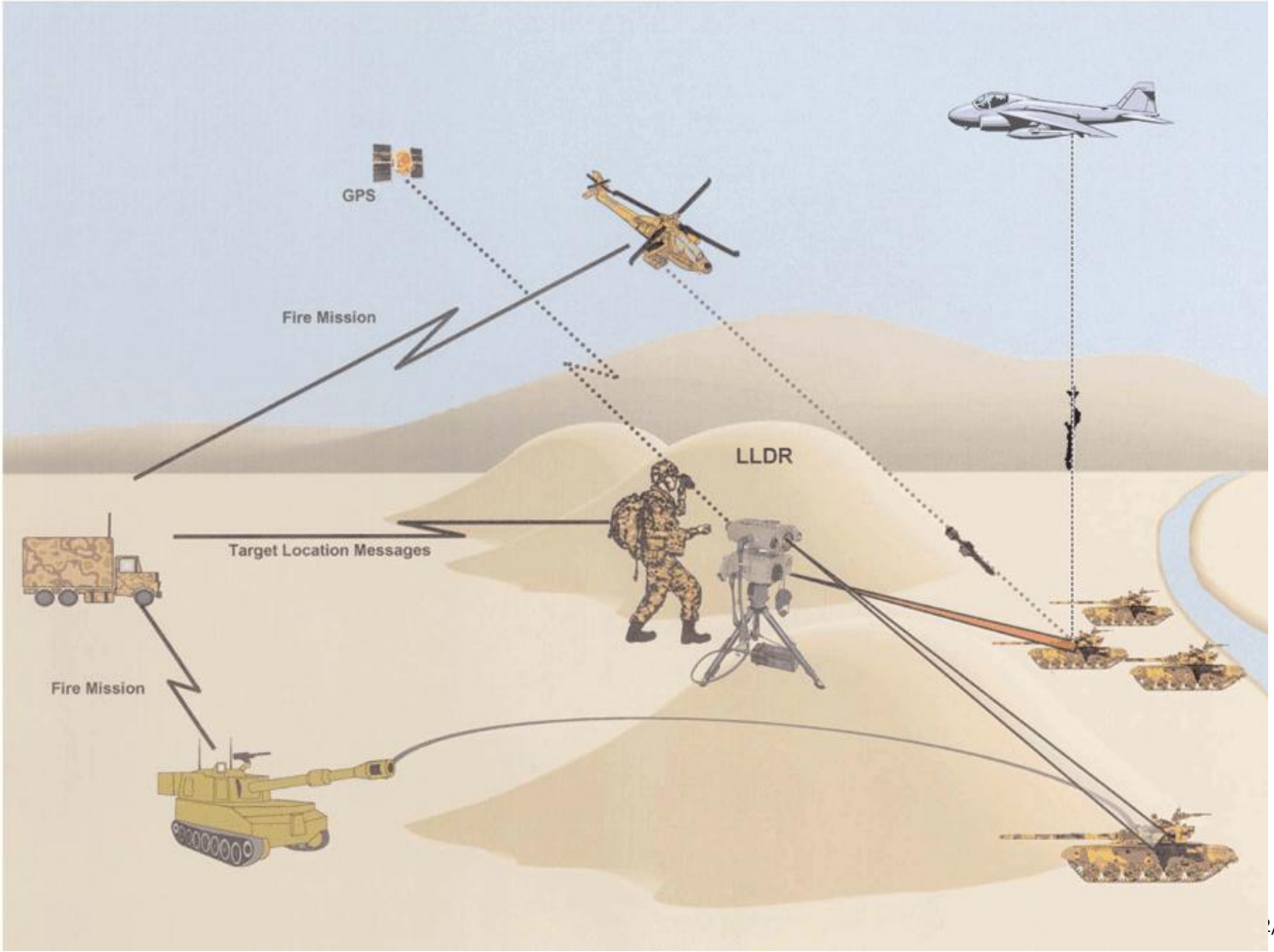
Laser Borelight System

Integrated Laser White Light Pointer

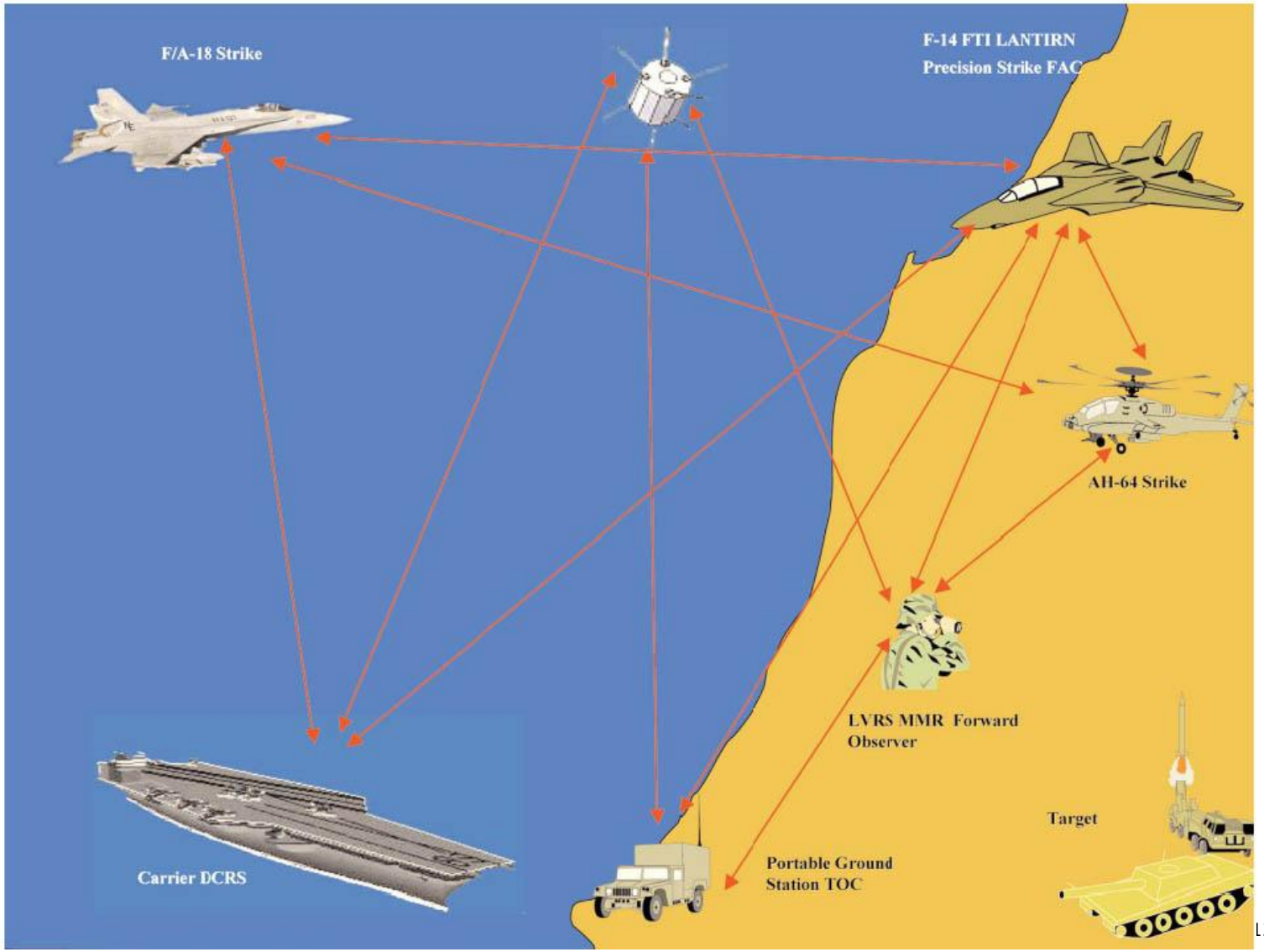
Enhanced Night Vision Goggles

Sniper Night Sight AN/PVS-10

Lightweight Laser Designator Rangefinder (LLDR)



Lightweight Video Reconnaissance System Tactical Scenario



Agenda

- Organization
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- **Clothing and Individual Equipment**
- Weapons

Product Manager
Clothing and Individual Equipment

- ✓ **Ballistic/Personal Protection**
- ✓ **Tactical/Environmental Clothing**
- ✓ **Individual/Unit Equipment**
- ✓ **Chemical Gear**
- ✓ **Personal Clothing**

Advance Tactical Parachute System

Infantry Combat Boot

MP Belt

Interceptor Body Armor

Advanced Bomb Suit

Micro Rappel System

Joint Service Lightweight Integrated Suit Technology (JSLIST)

MOLLE 2 (Army Version)

Interceptor Body Armor (IBA)

Outer Tactical Vest (OTV)

Small Arms Protective Inserts (SAPI)

Agenda

- Organization
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- **Weapons**

PM Soldier Weapons Mission

Guarantee U.S. Soldiers have an ***overmatch*** in individual and crew served weapons capabilities on present and future battlefields.

Maintain individual and crew served weapons' ***readiness*** for the Army through intensive management of the full acquisition life cycle.

Be ***immediately responsive*** to the Soldier's wartime individual and crew served weapons requirements.

Ensure interoperability with Soldier System programs to achieve the goals of the Objective Force Soldier.

Soldier Weapons Today and Tomorrow

Individual

CIRCA (1963)

M4 CARBINE

M16A4 RIFLE

M16/M203

Crew Served

CIRCA (1933)

MK 19 Grenade Machine Gun

M2 .50 CAL Machine gun

Individual Weapons

25mm Ammo
High & Low Velocity

- Airburst
- Armor Piercing
- Thermobaric

40mm Ammo

- Thermobaric

Crew Served Weapons

XM8 Carbine

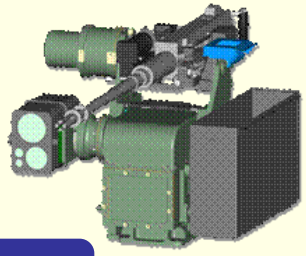
XM320 40mm Grenade Launcher

XM25 Air Burst Weapon

XM29 Integrated Airburst Weapon System

XM307/XM312 Advanced Crew Served Weapon

Common Remotely Operated Weapons Station (CROWS)



Lethality Leap Ahead Achievable in 24/36 Months

Advanced Crew Served Weapon

XM307

Kit Change
at
Unit Level
(5 Parts)

XM312

- Supports FCS Block 1 Defensive Armaments
- 25mm Munitions
  - Air-bursting Munitions Defeats Defilade Targets
  - Armor Piercing Munitions Defeats Light Armor
- Day/Night/All Weather Capable Fire Control

- Supports FCS Field Evaluation
- Supports Stryker BCT Fieldings
- XM312 is a Direct Replacement For 86 Year M2
- Accelerated Program Possible w/Funding
  - Delivers Start in 12 mo - 50 Wpns in 18 mo
  - Full-rate Production Line In 24 mo

- One Weapon Replaces Two Weapons – M2 & MK19
- Dual Feed Capability
- Light Weight
  - Can be Dismounted from Platform
  - 2-man Portable (50.3 lbs) vice 128 lb M2 or 144 lb MK19
- System Dispersion 1.5 mil
- No Headspace or Timing Adjustments
- Maximum Commonality between XM307 and XM312
- Minimized Future Logistic Impact
- Capable of Remote Operations

Shoots/Handles/Maintains Like A Light Machine Gun

Advanced Crew Served Weapon Firings

Advanced Crew Served Weapon Firings

Advanced Crew Served Weapon Firings

Advanced Crew Served Weapon Firings

XM307/XM312 Potential Platforms

FCS Potential Roles

Common Close Support Weapon for:

MCS

FRMV

NLOS-C

FTTS

25mm

Replace 5 Parts

.50 Cal

- Fire on the Move with Stabilized Mount (CROWS)
- Minimal Interior Vehicle Space Claim
- Dual Feed Capability
- Capable of Remote Operations
- Dismountable
  - Light Weight – 2 Man Portable
  - Land Warrior Ready
- Smaller Logistical Footprint

One Weapon Replaces Two Weapons M2 and MK19

Other Platforms

XM29 Spiral Development

Old "Total System" Blocked Development

Block 1

Block 2

Block 3

New Spiral Development with Incremental Fielding

XM25 with Air Bursting Ammo (25mm)

XM8 Carbine

XM320 40mm Grenade Launcher

XM104 Target Acquisition Fire Control System

XM29

XM8 Future Combat Rifle

Multiple barrels converted at unit level

Heavy Barrel

Long Barrel

Compact Barrel

Standard Barrel

Accessory Shot Gun

Integrated Multifunction Sight

Bipod for sharpshooter variant

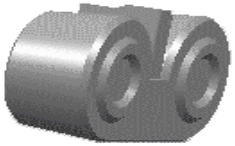
Quick attach forward hand grip

Quick attach 40mm (XM320)

Reliability Improved Magazine

Improved telescopic butt stock

Changeable lower receiver allowing conversion to 7.62mm



High Capacity Magazine

Modularity/Reliability/Lethality in a Lighter Package

XM 25 Concept

XM29 Subsystem Spin Offs

High Explosive Air Bursting Ammo

Training

Flechette

Thermobaric

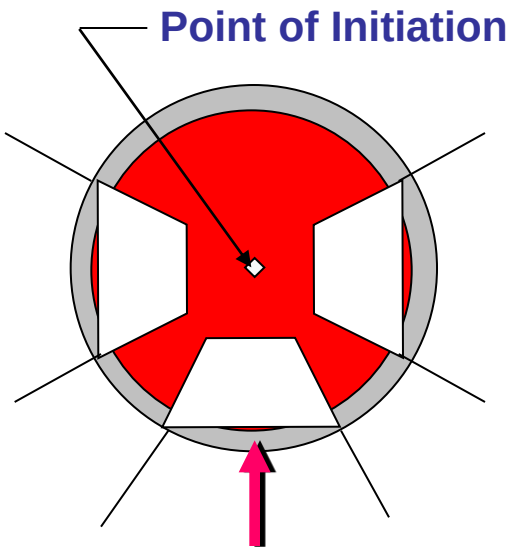
25mm Low Velocity Ammo

XM25

Available for Testing in FY 05

Ultra Lightweight and XM25/XM29 Thermal Capability

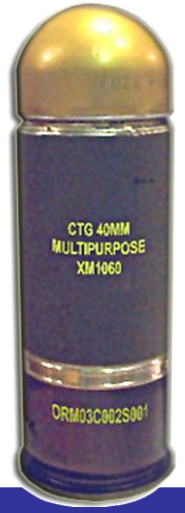
Thermobaric Munitions



- **40mm Low Velocity Rounds Deployed to Afghanistan**
- **Technology/Utility of Thermobarics Demonstrated**
- **Munitions Have Agility to Defeat a Range of Targets**
- **Pressure and Light Output Used in Combination to Defeat Enemy Vulnerabilities**

Legend
Red– 40MM Thermobaric Grenade
Ph/PK = 1
White-40MM HEDP Grenade
Ph/Pk >0.5<1.0

Operational Use
Similar to M433 HEDP
Common Warnings Apply



Thermobarics Provide Surgical Effectiveness

Thermobaric Munitions Suite

25mm Low Velocity

25mm High Velocity

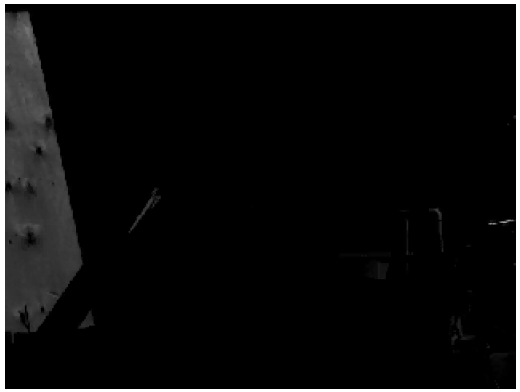
40mm Low Velocity

XM25

XM307

XM8 w/XM320

40mm TB Video



25mm TB Video

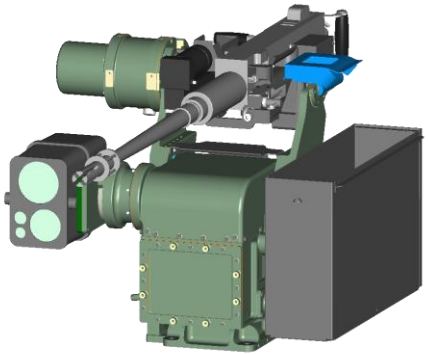
40mm TB Cave Video

Thermobaric Munitions Firings (40mm Static)

Thermobaric Munitions Firings (25mm Static)

Thermobaric Munitions Firings (40mm Dynamic)

Common Remotely Operated Weapons Station (CROWS)



CURRENT PROGRAM STATUS

- ORD Approved 26 April 99
- Joint Program (MP School/USAF)
- Engineering Assessments On-going
- Three updated Prototypes to be Fabricated by Dec03/Jan04 in support of DT/OT
- Initial Application Up-Armored HMWWV
- R&D partially funded
- Production not funded
- Current system weight is 395

CAPABILITIES

- Provide A Remote Vehicle Mounting System For Machine Guns (MK19 GMG, .50 Cal M2, M240B, M249 And XM307).
- Permits Under Armor Operation Of Existing And Future Crew Served Weapons.
- HTI Potential For Current And Future Platforms

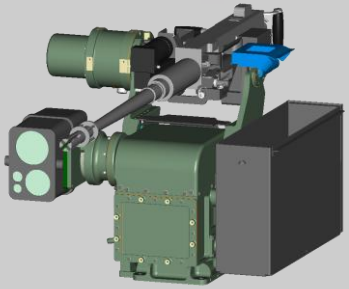
CROWS Firing on the Move

XUV Demonstration

"Soldiers are the Centerpiece of our Formations"

GEN Shinseki

The Soldier "America's Most Deployed Weapon System"



We Can Deliver